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RHMFIUU/DEPT OF ENERGY WASHINGTON DC
RUCPDOG/DEPT OF COMMERCE WASHINGTON DC
RUEATRS/DEPT OF TREASURY WASHINGTON DC
RUEHBJ/AMEMBASSY BEIJING PRIORITY 0125
RUEHRL/AMEMBASSY BERLIN PRIORITY 0010
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UNCLAS SECTION 01 OF 04 MUMBAI 000463

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DEPT OF ENERGY IP FOR TCUTLER, CGILLESPIE, GBISCONTI
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TAGS: [ENRG](#) [SENV](#) [EINV](#) [EFIN](#) [EIND](#) [PGOV](#) [IN](#)
SUBJECT: SUZLON POWERS CAPACITY BUILDING IN WIND ENERGY IN INDIA BUT
PITFALLS LOOM AHEAD

REF: 08 NEW DELHI 2386

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Summary:

1. (U) Suzlon Energy, which accounts for nearly 50 percent of the India's installed wind-power generating capacity, told Congenoffs that wind power's potential in India is far greater than Government of India estimations. Company boosters claimed that Suzlon has "popularized" wind energy in India by developing wind parks to facilitate easy operation and maintenance of multiple wind turbines in one location. In addition, Suzlon representatives believe that government subsidies for wind power generation will help this nascent industry attract foreign investors. Notwithstanding Suzlon's rosy picture, company representatives and industry analysts admitted that many challenges threaten to slow the development of wind energy in India, including problems over land acquisition for windparks, inadequate infrastructure, poor grid connectivity, low and seasonal wind speeds, costly maintenance of offshore wind turbines, and design and quality issues. In particular, reports of Suzlon's continuing quality control problems will also impact their overseas expansion. End Summary.

Untapped Wind Power Potential Creates Huge Opportunities

2. (U) I.C. Mangal, Head of Business Development of India-based Suzlon Energy, which is the fifth largest wind turbine manufacturer worldwide, believes that the wind energy business is experiencing a worldwide uptrend. India is the world's fifth largest market for wind energy generation, with a current installed capacity of 8.8 GigaWatts (GW). The Ministry of New and Renewable Energy (MNRE) estimates the potential of wind energy in India at 60 GW (reftel). However, Mangal considers this a gross underestimate and does not reflect the industry's technological advancements. For example, he noted that the "hub

height" for wind turbines has increased from 40 meters to over 60 meters to capture more wind power. He estimates that the "true" wind power potential in India is 100 GW. He noted that the untapped potential for wind energy allows "space for everyone," especially given India's growing energy demand. (Note: In reftel, GOI power and planning officials pointed out that the best wind areas may have already been exploited for power generation, and they estimated that only around 2 GW of power is currently being generated from the 8.8 GW of installed capacity.)

13. (U) The Indian government projects that total electricity demand will reach 200 GW by 2012, up from the current total installed power generating capacity of 144 GW. In such a situation, all sources of energy are urgently required and "carbon-neutral" energy like wind should be the first choice, Mangal argued. At an average cost per unit of wind power of INR 3.5 (around 7.7 U.S. cents) per kilowatt-hours (kWh), wind energy is not expensive compared to thermal power, which averages around INR 2.4 (around 5 cents) per kWh.

14. (U) Ramya Venkatraman, Energy Analyst at McKinsey & Co, noted that, despite the competitive cost, the wind power had not yet gained popularity with large power utilities/companies. No large power company has a significant presence in wind so far, she said, though most large thermal energy players are now planning to explore wind energy, she claimed. With tax incentives and carbon credits, Venkatraman believes that wind energy was earlier considered a source of "tax breaks" rather than electricity. This sector is now being regarded as a revenue-generator as well as an alternative renewable fuel source. Suzlon Energy, with its large global footprint, has demonstrated the commercial viability of wind energy, she added.

Suzlon's Wind Parks Transformed India's Wind Energy Landscape

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15. (U) Suzlon Energy has constructed 50 percent of wind power installations in India, or about 4 GW of the country's total 8.8GW of wind power capacity. Mangal said that Suzlon gained dominance in the wind power market despite being a late entrant in the sector. When Suzlon forayed into wind power development in 1995-96, however, the wind industry was in the doldrums: proper techno-viability studies were not conducted and companies sold wind turbines but did not provide after-sales service or maintenance, he claimed. Most of the European vendors of wind technology had either gone bankrupt or had split with their Indian joint venture partners. Moreover, the wind energy units were scattered in different locations across India, making servicing difficult and not economically feasible, he explained. Mangal argued that Suzlon Energy's unique "end-to-end" solution approach transformed the wind energy space in the country. He said that Suzlon is the only vertically integrated wind energy player with R&D, design, manufacturing, construction, and operations under one roof.

16. (U) Mangal also claimed that Suzlon pioneered the concept of a "wind park," where several wind energy units are located together in one place. This makes servicing and support of the units easier and allows multiple players in a single area to leverage on cost and economic efficiencies, he explained. By constructing wind turbines in wind parks, Suzlon can provide "round-the-clock" operation and maintenance support to the installed wind turbines, minimizing downtime and maximizing machine availability, he maintained.

Generation-based Incentive Will Attract Foreign Investors

17. (U) Mangal applauded the Indian government's announcement in June 2008 allowing wind energy operators to switch to a generation-based incentive of Rs0.50 per kWh (about 1.1 US cents) produced by wind power as an alternative to the current system of allowing accelerated depreciation of up to 80 percent

of capital costs for wind energy projects. (Note: The Indian government also gives a 10-year income tax holiday and excise duty exemptions to wind energy operators. Analysts believe that these incentives reward investment and ignore the quantum of wind energy actually generated. End Note). Mangal pointed out that apart from increasing the amount of wind power generated, the generation-based incentive will also attract foreign investors who do not have operations in India and therefore cannot avail of the tax incentives given to wind power operators.

18. (U) Ravindra Utigkar, Sr. General Manager (International Business) of Suzlon, noted that most of the investors in wind energy in India are single turbine owners, mostly medium and large companies, who are taking advantage of the accelerated depreciation benefit. A generation-based incentive which rewards actual generation of wind energy will attract "serious" investors and promote the development of wind energy in the country, he argued. In a separate discussion, Mangal disagreed with Utigkar and claimed that private corporations who invested in wind energy in India often invested in more than one wind turbine unit and are concerned about the returns on their investment in wind energy.

19. (U) Utigkar noted that the renewable purchase specification (RPS), which requires power companies to source a minimum specified percentage of electricity annually from renewable sources, also helped promote wind energy in India. However, he complained that Indian distribution companies often preferred to pay "penalties" rather than invest in renewable energy projects.

(Note: The Maharashtra Energy Development Agency (MEDA) fined four electricity suppliers in Maharashtra, including Anil

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Ambani's Reliance Energy, for not meeting their RPS obligations for 2007-08. According to the MEDA, Reliance Energy sourced just 0.01 percent of its total energy input from renewable sources as compared to the RPS obligation of 4 percent and was fined USD 41 million for the shortfall. Tata Power was the only electricity supplier in the state to meet and exceed its RPS obligation. End Note).

Challenges Inhibiting Wind Energy Development

110. (U) Mangal said land acquisition is the main obstacle to the development of wind energy capacity in India. Multiple clearances, objections from the environment and forest ministries, and opposition from local residents make land acquisition and site development a challenge. The state government, although aware of the potential of wind energy, does not assist in the land acquisition process, treating it as a commercial issue and, therefore, the responsibility of private enterprise, Mangal complained. For this reason, Suzlon needs to create eco-awareness about wind energy, he added. At present, Suzlon is having a lot of problems in the development of wind energy sites in Maharashtra. Mangal said that the company has completed the capacity expansion of the wind farm at Dhule in Maharashtra to 680 MW but will not proceed with further capacity expansion to 1,000 MW until the company resolves land acquisition problems and opposition from local residents. (Note:

At one wind park outside Pune, Suzlon had implemented a robust Corporate Social Responsibility program, turning wind park land into grazing land, and investing in a holistic irrigation system for neighboring villages. End Note.)

111. (U) Suzlon's largest turbine has a capacity 2.1 MW. Its recent acquisition of German-based RE Power Systems brought larger wind turbines with a capacity of 5 MW into its product portfolio. However, these larger turbines will be constructed in India's offshore coastal waters and will not be brought into India, despite the high cost of maintaining offshore wind sites. Utigkar noted that India's existing infrastructure cannot support wind turbines greater than 2 MW of capacity. Turbine blades with a capacity of over 2 MW measure more than 40 meters in length and cannot be transported on Indian roads, he

explained. Utigkar also noted that winds in India are seasonal; around 60 percent of total wind energy generated through the year is generated in the four monsoon months of June, July, August, and September. Wind turbines can operate at winds as low as 3.5-4.5 meters per second, but the generation of wind energy is not economically viable at such low wind speeds. Wind turbines can operate in high wind speeds of 65 meters per second, but not in a sustained manner, he continued. (Note: At the Pune wind park, engineers told Congenoff that due to variable wind speeds, those turbines generated only about 25 percent of their installed capacity on a regular basis. End note.)

¶12. (U) Utigkar also pointed out that grid connectivity and the distance between load centers where the electricity is consumed is another inhibitor for wind energy generation. Land is cheaply available in remote areas but cables are required to connect the turbines to the main consumption centers to off-take the wind power generated, which is extremely expensive, he said. At the Pune wind park, engineers told Congenoff that since most grids are small and self-contained, wind energy can often go to waste if it is generated at night, or when the electricity is not needed, especially as there is no way to store the excess energy.

Reported Quality Problems with Suzlon Turbines

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¶13. (U) In the last few months, press reports indicated that Suzlon's turbine blades had cracked, especially at U.S. windmills. Mangal claimed that the company was being "maliciously" and "unfairly" targeted and that the stories were mostly untrue. However, Rajiv Samant of Tata Power said that his company prefers to source its wind turbines from Suzlon's Indian competitor, Enercon, which is a joint venture between the Mehra group and Enercon GmbH of Germany. He claimed that the Suzlon wind turbines had a "design flaw" and "are not able to withstand high wind speeds." They are based on gearbox technology, he added. Gearless technology, which is what Enercon offers, is better suited for variable wind speeds, he continued. Samant added that Suzlon is not able to switch to gearless technology as Enercon holds the patent rights to this technology.

¶14. (U) Comment: While Suzlon is understandably bullish about the potential of wind energy in India, the facts on the ground must temper this reality somewhat. Wind power generation is not easy to accomplish in any country, and certainly not without its India-specific challenges. Many of Suzlon's problems - land acquisition issues, grid connectivity, and inadequate infrastructure - are symbolic of the challenges that the power sector faces in India. Bold state-government intervention and regulatory reform is needed to attract investment in the power sector to stem India's energy crunch. Mere provision of subsidies and tax incentives is no longer sufficient. End Comment.
Kauffmann